

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions and listings of claims in the application:

1-7. (Cancelled)

8. (Currently Amended) A method for manufacturing a glass substrate for an information recording medium, the manufacturing method comprising:

a pre-grinding first washing step for washing a surface of a polished disk-shaped glass plate with a strong acid washing liquid, wherein the strong acid washing liquid alters the glass substrate to form an altered surface layer on an inner portion of the glass plate, wherein the strong acid washing liquid decreases a chemical resistance of the altered surface layer;

a pre-grinding second washing step for washing the surface and then with a strong alkaline washing liquid, wherein the strong alkaline washing liquid removes a part of the altered surface layer, wherein a thickness of the altered surface layer is controlled by a washing time of the surface in the strong acid washing liquid and in the strong alkaline washing liquid; , wherein an altered surface layer is formed on the surface of the glass plate by washing with the strong acid washing liquid in the pre-grinding washing step; thereafter

subsequent to both the first washing step and the second washing step, a step for grinding the altered surface layer for a depth of 0.5 nm or more with abrasion grains so that the altered surface layer has a thickness of 3 nm or less, wherein the grinding of the altered surface layer forms a texture including projections on the surface of the glass plate; and thereafter

subsequent to the pre-grinding step, a post-grinding washing step for washing the surface with an alkaline washing liquid, wherein the alkaline washing liquid removes a remaining portion of the altered surface layer from the inner portion without affecting the inner portion. altered surface layer formed by acidic washing in the pre-grinding washing step is removed by the step for grinding and the post-grinding washing step.

9. **(Currently Amended)** The manufacturing method according to claim 8, wherein the ~~removing~~ grinding step includes scrubbing the surface with a scrub member in a circumferential direction of the glass plate while supplying the surface with diamond abrasion grains.

10. **(Currently Amended)** The manufacturing method according to claim 8, wherein the pre-grinding first washing step includes immersing the polished glass plate in the strong acid washing liquid and then immersing in the strong alkaline washing liquid in the pre-grinding second washing step.

11. **(Currently Amended)** A method for manufacturing a glass substrate for an information recording medium, the manufacturing method comprising:

preparing a disk-shaped glass plate containing silicon oxide, aluminum oxide, and alkaline earth metal oxide with a uniform chemical composition;

polishing the glass plate to form a smooth surface;

immersing the polished glass plate in a strong acid solution to form an altered surface layer on an inner portion, wherein an in which the ingredient ratio of at least one of aluminum oxide and alkaline earth metal oxide is decreased in the altered surface layer compared to the inner portion;

subsequent to immersing the polished glass plate in the strong acid solution, immersing the polished glass plate and then in a strong alkaline solution, wherein the strong alkaline solution removes a part of the altered surface layer; thereafter

subsequent to immersing the polished glass plate in the strong acid solution and in the strong alkaline solution, removing at least part of the altered surface layer with an abrasive to such that the altered surface layer has a thickness of 3 nm or less; and thereafter

uniformly etching the altered surface layer having a thickness of 3 nm or less while washing off the abrasive with an alkaline washing liquid wherein the inner portion is unaffected by the alkaline washing liquid.

12. **(Previously Presented)** The manufacturing method according to claim 11, wherein the strong acid solution has a pH of 3.0 or less.

13. **(Previously Presented)** The manufacturing method according to claim 12, wherein the strong alkaline solution has a pH value of 10.5 or greater.

14. **(Currently Amended)** The manufacturing method according to claim 11, ~~wherein said forming the surface layer includes~~ further comprising removing adhered substances that are adhered on the smooth surface.

15. **(Previously Presented)** The manufacturing method according to claim 11, wherein the alkaline washing liquid used in said etching is an alkaline solution having a pH of 11.0 to 13.0.

16. **(Previously Presented)** The manufacturing method according to claim 8, wherein the step for grinding is a texture formation step for forming a texture on the surface of the glass plate.

17. **(Currently Amended)** The manufacturing method according to claim 8, wherein the pre-grinding first washing step, the pre-grinding second washing step, the step for grinding, and the post-grinding washing step are controlled to adjust ~~the a~~ a thickness of the altered surface layer finally remained on the glass plate.

18. **(Currently Amended)** The manufacturing method according to claim 11, wherein said immersing, said removing, and said uniformly etching are controlled to adjust ~~the a~~ a thickness of the altered surface layer ~~finally remained~~ remaining on the glass plate.

19. **(Currently Amended)** The manufacturing method according to claim 8, wherein the pre-grinding first washing step, the pre-grinding second washing step, the step for grinding, and the post-grinding washing step are sequentially performed.

20. **(Previously Presented)** The manufacturing method according to claim 8, wherein the glass substrate is made of a multi-component glass material selected from the group consisting of soda lime glass, aluminosilicate glass, borosilicate glass and crystallization glass.

21. **(Currently Amended)** The manufacturing method according to claim 8, wherein a chemical strengthening process is performed between any one of the pre-grinding first washing step, the pre-grinding second washing step, the step for grinding, and the post-grinding washing step.

22. **(Currently Amended)** The manufacturing method according to claim 8, wherein the pre-grinding first washing step includes immersing the polished glass plate in the strong acid washing liquid having a pH of 3.0 or less and the pre-grinding second washing step includes ~~then~~ immersing the polished glass plate in the strong alkaline washing liquid having a pH of 10.5 or greater.

23. **(Previously Presented)** The manufacturing method according to claim 22, wherein the immersing in the strong acid washing liquid and the immersing in the strong alkaline washing liquid are performed for the same immersion time period under the same temperature.

24. **(Previously Presented)** The manufacturing method according to claim 23, wherein the pre-grinding washing step includes immersing the polished glass plate in 0.01% of a hydrofluoric acid solution for three minutes under a temperature of 35°C and then immersing in 0.01% of a potassium hydroxide solution for three minutes under a temperature of 35°C.

25. **(Previously Presented)** The manufacturing method according to claim 11, wherein the immersing step, the removing step and the uniformly etching step are sequentially performed.

26. **(Previously Presented)** The manufacturing method according to claim 8, wherein a deviation rate of surface roughness Ra of the glass substrate is less than or equal to 3%.

27. **(Previously Presented)** The manufacturing method according to claim 11, wherein a deviation rate of surface roughness Ra of the glass substrate is less than or equal to 3%.

28. **(Currently Amended)** The manufacturing method according to claim 8, wherein the pre-grinding first washing step includes immersing the polished glass plate in the strong acid washing liquid and subsequently in the strong alkaline washing liquid in the pre-grinding second washing step for the same immersion time period under the same temperature with the strong acid washing liquid and the strong alkaline washing liquid having the same concentration.

29. **(Currently Amended)** The manufacturing method according to claim 11, wherein the immersing steps includes immersing the polished glass plate in the strong acid solution and subsequently in the strong alkaline solution for the same immersion time period under the same temperature with the strong acid solution and the strong alkaline solution having the same concentration.